FORECAST FOR AUTOMATION BRANCH, OPERATIONS DIVISION,

ACTIVITIES FOR FY-1964 AND FY-1965

1. **MISSION:**

   To provide Project Operations, through electronic data processing methods, those usable products which will appreciably decrease the time of the preparatory phases of operations, greatly increase the planning flexibility, and provide display data to be used by competent authority in the decision making process.

   The term "usable products" includes complete flight planning for OXCART and IDEALIST, ephemeris production and plotting for CORONA, and other future programs as determined feasible and desirable.

2. **FUNCTIONS AND OBJECTIVES:**

   a. The immediate tasks for this period will be to complete the initial requirements for the establishment and functioning of the Automation Branch which were initiated during the last half of FY-1963. The following are the major requirements for the initial phase:

   (1) Acquire personnel, equipment, and space.

   (2) Define Project needs and desires.

   (3) Determine source data requirements.

   (4) Develop source data for machine input.

   (5) Construct machine programs to accept source data and compute desired results.

   (6) Present results in intelligible and useful form.

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b. The chief objectives for this period will be the following:

(1) Refine the programs in paragraph 1. above, to include:

(a) A sophisticated flight plan for OXCART with weather, intelligence, and emergency field data inputs.

(b) A follow-on program for CORONA to include inclination angle selection, target evaluation and selection, and sun angle comparison.

(c) Flight planning for IDEALIST considering sun angle computation and film timing.

(2) Study and develop methods of electronic visual display of program results.

(3) Continue study of future program requirements of which the possibilities appear to be almost unlimited.

3. CONCEPT OF OPERATIONS:

The original concept for the initial phase of Automation Branch activities contemplated the use of the UNIVAC 490 installation at the National Photographic Interpretation Center. Manning of the activity was planned on the basis of eight people; three officers, three programmers, and two clerks. Five of the eight personnel would be at the NPIC location and the other three people would be co-located with OD/OSA. In addition to the basic computer installation, the following items of additional equipment were required and requisitioned:

1 IBM printing card punch, Model 26

1 IBM verifier, Model 56

1 IBM card-controlled tape punch, Model 63

2 electronic plotters (1 for Area 51)

A study was initiated of the requirement for communications equipment necessary to provide secure transmission of information between the NPIC installation and the OSA/OD/Control Center as well as between the Control Center [   ]. This study is continuing with close coordination between personnel of the Automation Branch and Communications Division.

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In line with the above concept it was planned that the first production effort, to be achieved during the initial phase (FY-1963), would be the basic flight plan for OXCART with the sophisticated version to be developed during the latter part of the first half of FY-1964. The initial ephemeris plotting for CORONA ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ were forecast along with flight planning for IDEALIST for the first quarter of FY-1964.

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A February 1963 decision by the Deputy Director (Research) to progress rapidly with programs for CORONA/LANYARD altered the original concept to some extent; the full implications of which have not yet materialized. ADPS offered the use of the IBM 1410 in the building and provided two programmers on loan for approximately a year. Offutt Weather Central provided some machine program computations. It now appears an ephemeris program for CORONA will be completed by 1 April 1963.

Use of the NPIC UNIVAC 490 is now deemed unlikely. All initial programming will be accomplished utilizing the IBM 1410 in the basement of the Headquarters Building. A concerted effort by the Automatic Data Processing Section, Deputy Director (Support) to install an IBM 7090 in the basement has the complete support of DD/R. A large computer of the IBM 7090 speed and capacity is a definite requirement for these sophisticated programs enumerated in paragraph 2.b. above.

An expanded concept, envisioned to include even more sophistication of programs than outlined in paragraph 2.b. above, to be achieved to the greatest extent possible during this period, indicates a requirement for an increase in personnel and equipment. However, this increase cannot be accurately estimated at this time because it will be entirely dependent upon the magnitude of the projected programs and the rate of achievement of the objectives already outlined.

OSA operational electronic data processing is the function of the Operations Automation Branch under the Chief, Operations Division, who is responsible for controlling and directing the input and output information related to operational requirements. Considering the complex dynamic elements involved in mission planning the successful achievement of the EDP function will best assure effective command and control by Project Headquarters of all the various operational missions within its realm of responsibility.

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4. FUNDING ESTIMATES (PER FISCAL YEAR):

The funding required to support the concepts enumerated above is predicated on an increase of three people; GS-11 or equivalent - and Electronic Data Processing equipment except for rental costs for computing gear. It is understood the computing equipment will be funded by the ADPS.

Military pay	$44,000
Civilian pay	$63,000
Rental of EDP equipment	$18,000
Purchase of EDP equipment and maintenance support contract	$120,000
Travel and TDY	$12,000
TOTAL	$257,000

Distribution:
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      #1  - AD/OSA
#2 & 3  - OSA/FIN
      #4  - OSA/MD
      #5  - OSA/COMMO
      #6  - OSA/DD
      #7  - OSA/ADMIN
      #8  - OSA/COD
      #9  - OSA/OD/AB
     #10 - OSA/RB
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